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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/629,554	07/30/2003	Etsutaro Akagawa	H-1107	6530

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EXAMINER

CHOI, WOO H

ART UNIT PAPER NUMBER

2189

DATE MAILED: 10/04/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/629,554

Applicant(s)

AKAGAWA ET AL.

Examiner

Woo H. Choi

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 30 July 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-14, 17 and 18 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-14, 17, 18 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 30 July 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date 7/30/03, 9/07/04.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_.

## **DETAILED ACTION**

### ***Specification***

1. The title of the invention is not descriptive. A new title is required that is clearly indicative of the invention to which the claims are directed.

### ***Claim Rejections - 35 USC § 101***

2. 35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

3. Claims 17 and 18 are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter. While an executable computer program that is embodied in a computer readable medium is considered statutory, a program per se is non-statutory.

### ***Claim Rejections - 35 USC § 112***

4. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

5. Claims 1 – 14 and 17 - 18 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

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6. All of the independent claims recite the limitation “the volumes.” There is insufficient antecedent basis for this limitation. The Examiner also notes that some claims recite “the volumes” and “said volumes.” Applicant should pick one or the other limitation and use it consistently throughout the claims.

7. Claims 1 – 4, 8 – 10 and 11 recite the limitation “the volume.” There is insufficient antecedent basis for this limitation. The Examiner also notes that some claims recite “the volume” and “said volume.” Applicant should pick one or the other limitation and use it consistently throughout the claims.

8. Claim 1 recites the limitations “said computers that can access the volumes” and “said computers which are permitted to access said volumes.” There are insufficient antecedent bases for these limitations. The claims do not specify which computers can access the volumes and which computers are permitted to access said volumes prior to these limitation. Claims 2 – 4, 8 – 11, 17 and 18 contain similar deficiencies.

9. Claim 2 recites the limitation “the connection device.” There is insufficient antecedent basis for this limitation.

10. Claim 3 recites the limitation “a procedure for notifying a fault ... , instead of executing said procedure for notifying the fault” doesn’t seem to make sense. It is not clear what is being claimed by this limitation. Claims 4 – 6 and 11 – 14 suffer from similar deficiencies. The

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Examiner further notes that since there is no “executing” limitation prior to this limitation, “instead of executing” is not a proper limitation in this and other claims reciting this limitation.

11. Claims 5, 12, 13 and 14 recite the limitation “said access control information.” There is insufficient antecedent basis for this limitation.

12. Claims 17 and 18 recite the limitations “the fault in the volume” and “the notice of fault in the volumes”, respectively. There are insufficient antecedent bases for these limitations.

13. All of the dependent claims are rejected for depending from defective parent claims discussed above.

***Claim Rejections - 35 USC § 103***

14. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

15. Claims 1, 2, 8 – 10, 17 and 18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Iwatani *et al.* (US Patent Application Publication 2001/0054093, hereinafter “Iwatani”) in view of Masahiro (Japanese Patent Publication No 2002-278905).

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16. With respect to claims 1, 2, 8 and 17, Iwatani discloses a network system (figure 1) comprising

computers (host 2),  
a plurality of storage devices (storage device 4) for managing the volumes connected to said computers through a SAN (storage area network), and  
a management computer (1) connected to said computers and said storage devices, wherein:

said storage device has a control unit (4a) for controlling the input and output to and from the volumes based on volume access control information for specifying the computers that can access the volumes (figure 5, 5a, 5c);  
and said management computer includes an interface for receiving a notice of fault in the volume (figure 9, figure 10, S1) and said volume access control information from said plurality of storage devices (page 2, Paragraphs 36 and 37).

However, Fukuoka does not specifically disclose that the fault of said volume is notified to said computers which are permitted to access said volumes based on said volume access control information. On the other hand, Masahiro teaches a method of notifying a storage volume fault based on volume access control information.

Masahi discloses that it is desirable to notify a host of the fault condition of storage equipment (Masahi, paragraph 6 of translated version of Masahi's detailed description). Masahi further discloses that the use of access list prevents unnecessary notification to hosts that are not permitted access to volumes (paragraph 11). It would have been obvious to one of ordinary skill in the art, having the teachings of Iwatani and Masahi before him at the time the invention was

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invention was made, to adopt the method of notifying a storage volume fault as taught by Masahi, in the system of Iwatani, in order to prevent waste of resources associated with sending unnecessary notices to hosts that cannot access the volume (paragraph 12).

17. With respect to claims 9, 10 and 18, Iwatani discloses
- a connection device (Fukuoka, figure 1, 3) that has a control unit for controlling the input and output of data among interfaces based on passage control information (figures 5a, 5c) defining the input and output of data among said interfaces.
- The system that results from the combination of Iwatani and Masahi would result in the notification of faults to hosts based on the host access information and the access path information since accessibility of a volume in a storage device to a host depends on both.

### ***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Woo H. Choi whose telephone number is (571) 272-4179. The examiner can normally be reached on M-F, 9:00-5:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Matt Kim can be reached on (571) 272-4182. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Woo H. Choi  
September 30, 2005